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ABSTRACT

A 2-year study was done on the effect of group therapy on the teacher-perceived classroom behavior of 82 hyperactive minority boys (ages 10-16 years) in a day school for disruptive children. By the end of the study, there were a minimum of four behaviors which indicated that the group therapy was accomplishing a statistically significant change in the experimental group: at the .05 level of significance, the experimental group was less likely to require assistance from others and to require teacher intervention for misbehavior than were the controls; and at the .62 level of significance they were less likely to flare up at classmates and to hit or push others. Among other findings was that the experimental group, overall, were more controlled in the classroom and less likely to interrupt classroom routine than were those not receiving group therapy. (A bibliography, a copy of the teacher rating form, and tabular data are appended). (DLS)

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TWO YEAR STUDY OF THE EFFECT OF GROUP THERAPY ON TEACHER PERCEIVED CLASSROOM BEHAVIOR OF HYPERACTIVE CHILDREN

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INTRODUCTION

In the school in which this study was conducted, group therapy seemed to be a promising resource for children for whom stimulant medication, (used to control deviant behavior), was not appropriate; who resisted taking it; or where parental attitudes (ranging from concern to neglect) constituted equally effective barriers. It was hoped that behavioral change would result from changes in contrast to the restraints imposed by medication. This is an echo of the familiar debate between the desirability of "controls from within" as preferable to "controls from without".

Group work, to recapitulate its history briefly (Back), developed out of the pioneering work of Adler and Moreno, with the discovery:

> that group techniques become more impressive and important for the members if the content of the group discussion is turned upon itself... Thus the main function of the group technique becomes the meeting or encounter and the interest is in the here-and-now...

Moreno's "groups" were really acting ensembles composed of therapists who took roles representing the patient's relationships. Adler was the first to meet with groups of parents and teachers whose members were "counseled" in the presence of the others so as to develop a better understanding of what we today would call the "Affective domain". The one element which makes group work in many settings a treatment of choice, however, is economy.

It was selected for this study because of the failure of insight therapy with neurologically impaired children, or B.I. children, to use an older terminology, who, as Burks describes them:

> evidence a tendency to be "concrete minded. Their fantasy lives are impoverished. This... makes it next to impossible to employ insight therapy...Hyperkinetic children find it difficult to maintain interest...

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This is of course obvious to anyone who works with hyperkinetic children. What was even more relevant was the opinion of authorities such as Slavson, for example. He states unequivocally concerning:

> ...experiences... with many thousands of children in a great number of groups... and in different situations... When conducted by qualified therapists, group psychotherapy for children has proved almost unfailingly successful... Where it is not included... effective treatment of certain... emotional and physical disorders is rendered difficult, if not altogether impossible.

Research was not encouraging except for a report on the use of Transactional Analysis (Winkler, et al, Orlov, Woodward, Lisle). Winkler established five experimental conditions: individual counseling, group counseling, reading instruction, control, placebo. There were no significant differences in any case. Orlov isolated elementary school behavior problem children identified by school personnel. Medical opinion was not utilized. Control was a problem and Orlov is frank in stating that group counseling did not help or if it did, there was no way in which the change could be identified. Woodward reported success using Transactional Analysis with a population differentiated according to intellectual capacity, not hyperactivity. Finally, Lisle used group work in six forms for maladjusted third grade students: pupils only, parents only, teachers only, pupils and parents, pupils and teachers and parents and teachers. There were no statistically significant findings. A possible explanation of the unconvincing research findings were seen in the time factor. Ten or eleven weeks was common. More extended periods were rare. Finally, there was no evidence of research in the use of group work for specifically medically diagnosed hyperactive children in a school setting.

The Population

The population which is the subject of this report is summed up by the following profile:

1. Male - 100%
2. Average Age: 12.2; range 10 - 16
3. Socio-economic status (SES)
   - Minority blue collar - 67%
   - Minority lower middle - 27%
   - Minority Middle - 4%
   - White Middle - 2%
4. Fatherless homes - 73%
5. Other Children in Family - 92%
6. Public Assistance - 52%
7. Hyperactivity - 98%
8. Assaultive and/or Deviant Behavior - 96%
9. Excluded or proposed for exclusion from conventional classrooms - 91%
10. Deficiencies in all academic skills (2 years or more below grade) - 95%
11. Minority - 96%

Percentages represent approximations since they varied somewhat from year to year.

It should be noted that this profile blends in with other profiles suggestive of future delinquency. For example, a recent profile produced by the National Conference of Christians and Jews included similar items such as male age 12 to 17, single parent, fatherless home, one or two years behind in reading, frequent truant, surly, and antagonistic. This overlap gave added impetus towards the investigation of the effect of group therapy, as a possible mechanism for diverting anti-social behavior into more constructive channels.

The selection process that resulted in this most unusual population, unusual for a single institution, - male, hyperactive, aggressive, learning disabled, minority, school excluded, - had an external procedure independent of any policies of the school or any individuals. Where the local education authority had no available space, a certification of need by a psychiatrist and/or a neurologist and a psychologist, and sometimes all three, would result in a contract with a private facility to provide the required special education. By an accident of location in an area with a large inner city minority section, the population of the school became virtually exclusively a minority group.

It was not compulsory for a parent to enroll her child. He could either be enrolled in any private school, or wait for an opening in a public facility. Parents who enrolled their children often did so as to avoid home instruction which meant he would be for the most part in the streets. In addition the children who were enrolled were not only hyperactive, aggressive, etc. but also below IQ 110. They were not mentally retarded, since there was space in the public school for this category of child (below IQ 75). If they were above IQ 110, parents tended to prefer a less handicapped population. They phrased their preference as "wanting a smarter group," having sometimes noted the presence of a child whose incapacities and predilections they knew personally or knew through their own child. Other parents, shopping for school placement, were usually able to find private facilities who would also indicate the desirability of an environment that could stimulate children to "greater effort."

These other schools generally also preferred children with less tendency to "act out". The end result was that the IQ level was within a band ranging from approximately IQ 75 to IQ 105 (Median IQ 81).

It should be noted again that a high proportion was on Medicaid and a large number were not on a much higher income level. Local Medical services were limited or non-existent. Eighty percent of the children, it should be stressed, lived in mother-led homes and about half of these Mothers were working mothers, often at inconvenient hours at considerable distances. Many had had years

of experience with ineffectual visits to school because of their children's problems and were superficially apathetic. Persuading them that this school meant to be a genuine change agent and that they could be helpful thrmselves was often a long-term task for the social work department.

Over the two year period the experimental group displayed consistent behavior patterns. They were as described by Blau (1976), in his account of the group protocol:

> Keenly interested in comparing their powers with each other and loved to fight (but)... this love of fighting did not seem to derive so much from hostility as from eagerness to test and demonstrate their powers and also to deal with the matter of the "pecking order" ... Also while sexual material surfaced as was appropriate...their social concerns were more constantly visible... The norm for this group was behavior that was suspicious, fearful, wary of possible insult, ready for combat behavior.

From other observations they were also seen as rarely able to express positive or negative feelings directly toward each other. It was easier to tease each other or to provoke each other or to put each other down.

There is a tendency to see the classroom,as exacerbating all of the foregoing and a tendency to demand that each classroom become more of a group experience than a learning experience (Kemp). It is true that the orientation in the classroom is toward mastery of academic materials, remediation and the like. Status is achieved through success. Tokens are rewarded for success where behavior modification programs are in place. The children are fully aware, however, of their inadequacy in this area so that the demand for success may be seen as an irritant. Certainly the stream of destroyed arithmetic papers and spelling tests left behind these children would testify to this even through Individualized Educational Programs or IEP's are faithfully written and carefully implemented.

It is possible that a more distressing element in classroom life is the demand for quiet concentration and sustained work periods. It is most likely that it is this demand which is most distressing since it runs counter to the children's characteristic hyperactivity, resulting inevitably in the discharge of nervous energy through aggressive interchanges and emotional physical volatility.

The School

The special school in which the study was conducted is a day school. It is housed in an old community center. The population, all male, age 8 to 16, rarely is greater than one hundred. The staff-pupil ratio is 3.5 to 1.0. Classes average 12 in size and each certified special education teacher has an aide. Corridor guards maintain continuous "eyeball" control and assist where children explode. A Time Out Room is carefully structured and is available for cooling off. There is a large gym. There is a social work staff. The school day is 8:15 to 2 and children are transported by buses to school and from school in vehicles provided by the local education authority. There is also a modest job experience program which is conducted through a central office for volunteers. Several criteria must be met before children from age 13 to 16 may participate. These are of course such items as demonstrated responsibility, diminution of nomadic, hyperactive behavior, classroom achievement.

The school is essentially a crisis intervention center usually able and willing to admit disruptive children on proper certification almost on request subject to preliminary psychiatric screening and who generally conform with the profile previously referred to. An interdisciplinary approach is the chief characteristic of school procedure and involves an on-site psychiatric consultant working with the parent, teacher and social worker. An individualized educational program or IEP was always part of school procedure.

Special remediation techniques involve modality adapted procedures.

The Experimental Design

The experimental design produced two balanced groups stratified for such characteristics as therapy, length of stay in the school, foster home and natural parent custody, and severity of child or home pathology. Also IQ, reading level and previous group experience of any kind were all considered. Children were considered too young to participate if they were below age ten. Selection for one group or the other was the result of the use of a table of random numbers. Teacher representation was likewise stratified so that no class was excessively represented in any one group.

In each of the two years of the study, teacher observation of children's behavior was not cursory. Behavior in every case was evaluated and scored by teachers with whom the children

remained all day except for gym and the group therapy period or the placebo activity of the control group. See Appendix A for the Behavior Rating Scale, largely based on Burks' "Behavior Rating Scale for Organic Brain Dysfunction" with some added details drawn from other sources to conform with school needs.

In the first year, behavior was rated in November and then in March, a period of five months. In the second year, behavior was rated in January and then in April, a period of 4 months because other problems had precedence.

The E group in both years met with a group leader once a week according to a randomized schedule. The C group met with the health education teacher also according to a randomized schedule. The experimental group, in the first year, attempted to follow a program based on the "Magic Circle" of Besell and Palomares. This speedily became an open-ended group and was conducted as such the second year also. The control groups followed a program which consisted largely of gross motor activities as found in Harvatt and Cratty. This included handling basketballs, walking along straight lines with a weight on one arm, with hands extended, without looking down, and so forth. Also bean bag and ring tossing. In each year, both C and E groups were scheduled as part of the school's general departmental work so that their movements were not conspicuous and the randomized schedule precluded the labelling which normally occurs when a group is identified with any unusual procedure. The first year there were seven to ten children in each of three groups in both the E and C samples (N equalled 52), age range ten to sixteen, constituting the older segment of the school population. In the second year there were fewer groups, (N equalled 30).

Data Analysis

During the first year of the study, the 52 subjects were pre- and post- tested on several measures such as the Piers Harris CBCS, the California Test of Basic Skills as well as on a non-standardized behavior check list completed by the students' teachers. Since there was no statistical difference, based on *t* tests, between the Control and Experimental groups on any measure, a Chi square analysis was completed of each item on the behavioral check list to determine the significance of the direction of change of each behavior. Constraints of time and funds and the importance of behavior in this population contributed to this decision. Also the behavior check list was extremely detailed suggestive of the competency based evaluations now used in many areas hitherto subjected only to global measures.

A two by three contingency table was used to analyze each item. The experimental group was compared to the control group with regard to how many memebers of each group had an increased frequency score for a particular behavior, had a decreased frequency for a

particular behavior, or displayed no change with regard to that behavior.

Differences between the teachers' ratings of each student on the pre- and post-tests were the basis for the determination of change of behavior.

A sample contingency table from the first year of the study appears below, in Figure I:

A Sample Contingency Table for First Year of the Study

Figure I

	Increase in Behavior	No Change	Decrease in Behavior
Experimental	-- (See Appendix B)		
Control			

These Chi square analyses identified three behaviors at the .02 or .01 level of statistical significance. The experimental group were seen as more explosive and unpredictable and yet more likely to work independently on film strips and correct their own study exercises. At the .05 level of significance, the experimental group was also seen to work more independently on work sheets, and show more respect for authority. Given the fact that 37 Chi squares were computed some but not all of these differences might be attributable to chance. There is nonetheless a possibility that the group experience had some positive effect upon the experimental group.

Despite the overall lack of clear cut statistical significance, the enthusiasm for the group experience was high in the school and a decision was made to continue the group for a second year. Due to financial restrictions the experimental group and control group were each reduced to 15 for a total N of 30. This process was necessary because of the high mobility of students in this population. At the end of the second year 26 students remained in the study. Such conclusions as may be drawn from this study, therefore, must be seen as applying to a more stable and less mobile population. In addition only the behavioral checksheets were used as data for analysis in the second year. The failure to achieve significance plus the expense of commercial instruments resulted in the decision to use only the instrument which identified significant differences in the first year.

Since the N was smaller during the second year of the study, a two-by-two contingency table was used to test the significance of changes of behavior between the pre- and post- test for experimental and control groups. A sample contingency table for the second year appears in Figure II.

A Sample Contingency Table for the Second Year of the Study

Figure II

	No Change or Reduction in Behavior	Increase in Behavior
Experimental	-- (See Appendix C)	
Control		

A Chi square analysis of 37 teacher-rated behaviors was performed for the second year of the study. The results are reported in Table I in the Appendix.

The statistically significant results indicated that the experimental group was less likely to flare up at their classmates than was the control group (Item 19). The experimental group was less likely to hit or push others (Item 23). In addition, the experimental group did not require assistance from other pupils (Item 26), and was less likely to misbehave so that the teacher felt compelled to intervene (Item 34). It should be observed that no precaution could be taken to eliminate or limit teacher selectivity of items based on subjective factors for special attention.

At the close of the second year of the study, there still were a minimum of four behaviors which indicated that the group work was accomplishing a statistically significant change in the experimental group. Two of these behaviors were significant at the .05 level of statistical significance (Items 26 and 34) and could therefore probably be attributed to chance, given the fact that 37 Chi squares were computed. However, two behaviors (Items 19 and 23) were significant beyond the .62 level and were much less likely to be attributed to chance.

As previously indicated, this item by item analysis is in contrast to global summaries which, almost invariably, show no difference between E and C groups.

Further inspection of the data suggests a trend which may be described as follows:

In the second year, it was noticed that of the sixteen items which indicated some association between categories (e.g. pre-test higher for one group and post-test higher for the other), that the majority of items favored the experimental group. (Items 5,17,18, 19,21,23,26,27,30,34 and 37). The experimental group displayed more positive behaviors and less negative behaviors on these items than did the control group. On the other hand, on items 8,14,15, 16 and 29, the control group displayed more positive and less negative behavior. A Chi square analysis (Table II, Appendix) indicated that the difference between 11 and 5 was not statistically significant beyond the .05 level so that these apparent trends do not provide additional statistical evidence of the effectiveness of group work with this population.

Over the two years of the study, even with different group leaders, the significant differences in behavior continued to favor the Experimental over the Control group. The overall picture shows the members of the experimental group as more controlled in the classroom and less likely to interrupt the classroom routine than their classmates in the control group. It would seem that the opportunity to express and clarify their feelings in the group experience enables them to function better in the classroom. It

may be possible, therefore, that group work experience offers still another way of servicing a hyperactive minority adolescent boy.

From a broader point of view, it further identifies a possible approach to the needs of a special sub-group of the delinquency-prone, high risk child, the hyperactive child for whom heretofore medication has seemed the only alternative, Barcai and Rabin's paper "A Precursor of Delinquency: The Hyperactive Disorders of Childhood", and Blau's, "Medication, Predelinquency and Delinquency: An Eight Year Study", which also dealt with hyperactive, minority, high risk children. Barcai and Rabkin suggested early medication plus remediation and family therapy. Blau and Loveless found neither effective without medication, not only with respect to behavior but with respect to school achievement and attendance as well.

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Appendix A

Date: _____ Room: _____

Name of Child: _____ Time: _____ Observer: _____

Please rate each and every statement by putting an X in the appropriate square after the statement. The squares are numbered from 1 to 5 and represent the degree to which you have noticed the described behavior. The bases for making a judgment are given below:

(1) You have not noticed this behavior at all.
(2) You have noticed the behavior to a slight degree.
(3) You have noticed the behavior to a considerable degree.
(4) You have noticed the behavior to a large degree.
(5) You have noticed the behavior to a very large degree.

	Not At All 1	Slight Degree 2	Consid. Degree 3	Large Degree 4	Very Large Degree 5
1. Works independently on work sheet					
2. Behavior is erratic, flighty, or scattered.					
3. Student is easily distracted, lacks continuity of effort and perseverance.					
4. Individually listens to tape recorder					
5. Student appears to daydream, alternating with hyperactivity.					
6. Behavior is explosive and unpredictable					
7. Independently views filmstrip					
8. Cannot seem to control self (will speak out or jump out of seat).					
9. Poor coordination in large muscle activities (games, etc.).					
10. Becomes overexcited easily.					
11. Corrects a study exercise					
12. Acts as non-conformist (Refrains from following group activities)					
13. Works with supplemental rdg. material					
14. Rejects classmates in hostile manner.					
15. Becomes angry quickly					
16. Pupil discusses progress with teacher					
17. Pupil at desk not working					
18. Explodes under stress					

Name of Child: _____ Date: _____ Time: _____ Observer: _____ Rm.: _____

	Not At All 1	Slight Degree 2	Consid. Degree 3	Large Degree 4	Very Large Degree 5
19. Flares up at classmates if teased or pushed.					
20. Pupil goes to get materials.					
21. Talks to other pupils reasonably					
22. Laughs when others are in trouble.					
23. Hits or pushes others.					
24. Tends to boss others					
25. Makes sarcastic remarks.					
26. Receives assistance from other pupils					
27. Teases others.					
28. Plays tricks on other children					
29. Answers question directed toward him.					
30. Displays a don't care attitude					
31. Takes things which do not belong to him.					
32. Shows little respect for authority					
33. Asks a question.					
34. Behaves in such a way as to make it very likely that teacher will feel compelled to intervene					
35. Behaves in a nomadic fashion, shifting rapidly from activity to activity.					
36. Characteristically appears to be guarded, wary, apprehensive.					
37. Spills or throws objects					

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APPENDIX B - TABLE ONE

Data Concerning Year One of Study

Behavior Evaluation Check List. Items: see Appendix A		Contingency Table No Change	Increase or Decrease	X^2	Significance
1	E	10	3	<1.00	N.S.
	C	9	4		
2	E	11	2	1.62†	N.S.
	C	7	6		
3	E	8	5	<1.00	N.S.
	C	9	4		
4	E	11	2	<1.00	N.S.
	C	11	2		
5	E	8	5	<1.00	N.S.
	C	6	7		
6	E	8	5	<1.00	N.S.
	C	9	4		
7	E	8	5	<1.00†	N.S.
	C	11	2		
8	E	6	7	<1.00	N.S.
	C	7	6		
9	E	11	2	<1.00	N.S.
	C	10	3		
10	E	9	4	<1.00	N.S.
	C	7	6		
11	E	7	6	<1.00	N.S.
	C	8	5		
12	E	10	3	<1.00†	N.S.
	C	8	5		
13	E	10	3	<1.00	N.S.
	C	7	6		
14	E	6	7	<1.00	N.S.
	C	7	6		
15	E	6	7	1.40	N.S.
	C	9	4		
16	E	8	5	2.46	N.S.
	C	4	9		
17	E	7	6	<1.00	N.S.
	C	6	7		

† Yates correction employed

† Yates correction employed

Appendix B, Table One continued

18	E	8	5	<1.00	N.S.
	C	6	7		
19	E	9	4	5.56	p<.02
	C	3	10		
20	E	7	6	<1.00	N.S.
	C	8	5		
21	E	6	7	1.40	N.S.
	C	9	4		
22	E	5	8	<1.00	N.S.
	C	6	7		
23	E	11	2	5.8	p<.02
	C	5	8		
24	E	6	7	<1.00	N.S.
	C	5	8		
25	E	6	7	<1.00	N.S.
	C	5	8		
26	E	8	5	3.92	p<.05
	C	3	10		
27	E	9	4	1.40	N.S.
	C	6	7		
28	E	8	5	1.38	N.S.
	C	5	8		
29	E	8	5	1.38	N.S.
	C	5	8		
30	E	8	5	<1.00	N.S.
	C	6	7		
31	E	10	3	<1.00†	N.S.
	C	7	6		
32	E	8	5	<1.00	N.S.
	C	7	6		
33	E	8	5	<1.00	N.S.
	C	6	7		
34	E	9	4	3.84	p=.05
	C	4	9		
35	E	8	5	0.00	N.S.
	C	8	5		
36	E	9	4	<1.00	N.S.
	C	7	6		
37	E	8	5	<1.00	N.S.
	C	6	7		

APPENDIX C , TABLE TWO

Chi square analysis of Direction of Change for all Items. Second Year of Study.

	Change favoring E group	Change favoring C group
Observed Frequency	11	5
Expected Frequency	8	8

$X^2 = 2.25$ N.S.